



ata

MANUAL

OVERHAUL

CYLINDER AND VALVE ASSEMBLY 6350 SERIES

35-21-20

Oct 15/86

H-120

SCOTT®

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6350 SERIES

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IMPORTANT WARNINGS

The following WARNINGS are presented to inform the user of this manual of the requirements which shall be adhered to when performing service procedures on this equipment. Additional WARNINGS will be found in the procedural steps in the manual.

WARNING: ANY SERVICE OR OVERHAUL PERFORMED ON THIS APPARATUS SHALL BE DONE ONLY BY THOSE FACILITIES EXPERIENCED IN, OR BY PERSONNEL KNOWLEDGEABLE IN AVIATION OXYGEN EQUIPMENT. IF NONE ARE KNOWN, CONTACT SCOTT AVIATION OR ITS DISTRIBUTORS FOR NAMES OF AUTHORIZED SERVICE CENTERS.

WARNING: ALL PROCEDURES DESCRIBED IN THIS MANUAL SHALL BE PERFORMED IN AN AREA FREE OF OIL, GREASE, FLAMMABLE SOLVENTS OR OTHER COMBUSTIBLE MATERIALS. SUCH MATERIALS, AS WELL AS DUST, LINT, AND FINE METAL FILINGS ARE ALL POTENTIAL COMBUSTIBLES WHICH MIGHT, WHEN EXPOSED TO OXYGEN UNDER PRESSURE IGNITE AND RESULT IN AN EXPLOSION AND/OR FIRE.

WARNING: DO NOT ALLOW OIL, GREASE, FLAMMABLE SOLVENTS, OR OTHER COMBUSTIBLE MATERIALS TO COME IN CONTACT WITH PARTS THAT WILL BE EXPOSED TO PRESSURIZED OXYGEN. SUCH MATERIALS, AS WELL AS DUST, LINT, AND FINE METAL FILINGS ARE ALL POTENTIAL COMBUSTIBLES WHICH MIGHT, WHEN EXPOSED TO OXYGEN UNDER PRESSURE, IGNITE AND RESULT IN AN EXPLOSION.



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CYLINDER AND VALVE ASSEMBLY

1. Description and Operation

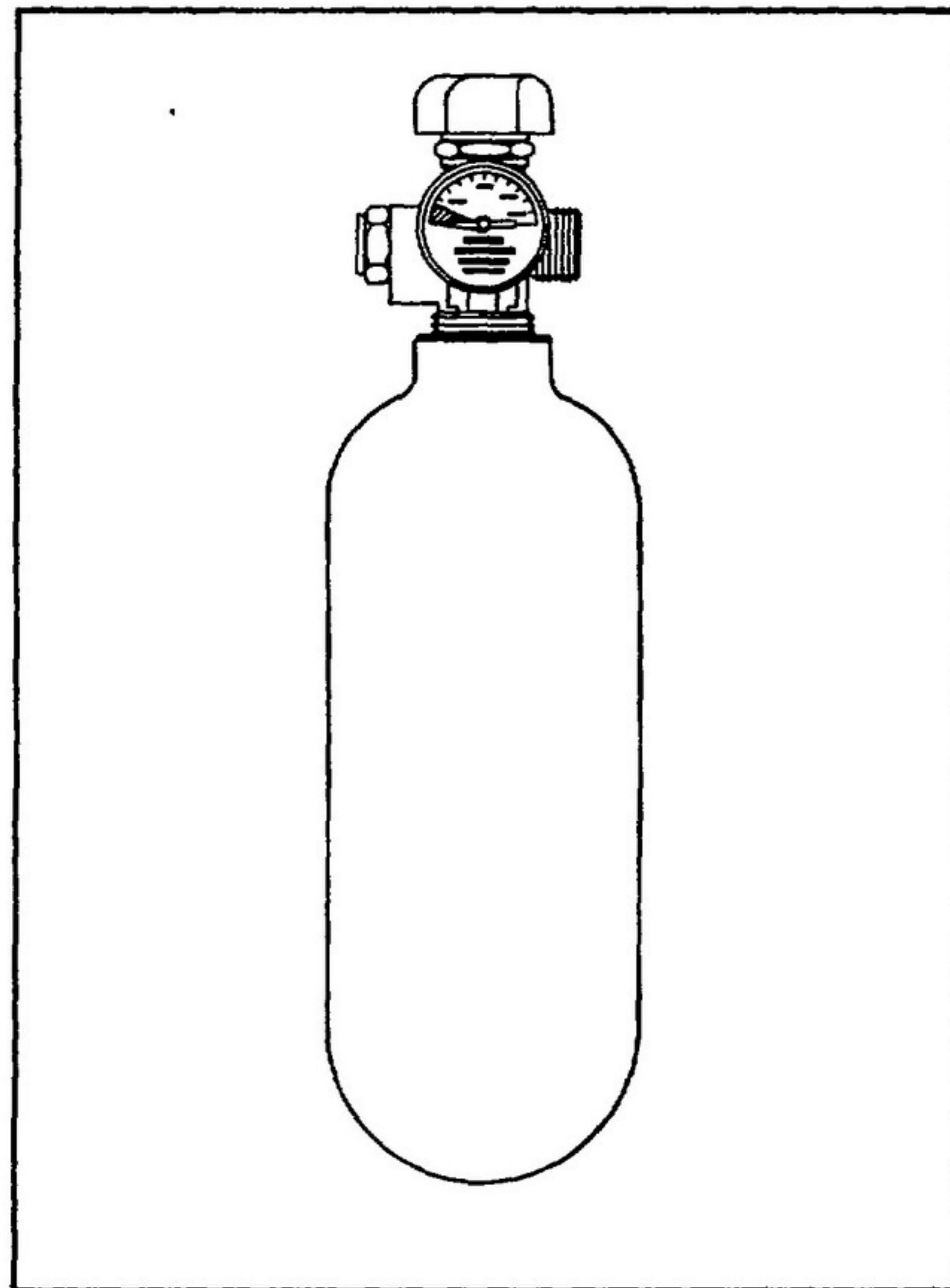
A. General

- (1) This manual provides overhaul instructions with illustrated parts list for the 6350 Series Cylinder and Valve Assemblies (see figure 1). The complete part number of any particular cylinder and valve assembly is an eight to eleven place combination of numbers and letters. An example part number and an explanation of the various numbers and letters which make up a part number are shown in figures 2, 3, and 4.

The cylinder and valve assemblies, although similar in design and appearance, are used for various applications. The major applications are to supply oxygen at altitudes where oxygen is required for breathing.

B. Purpose of Equipment

- (1) To furnish a predetermined supply of oxygen, dependent on the size of the cylinder.
- (2) The valves covered in this manual are manually operated "on-off" oxygen valves which are designed with a slow opening feature. The valves are nominally rated for 2000 psi service.
- (3) To furnish a shut-off valve for turning the oxygen supply "ON" or "OFF".
- (4) To furnish a safety device to vent excessive pressures in oxygen cylinders.



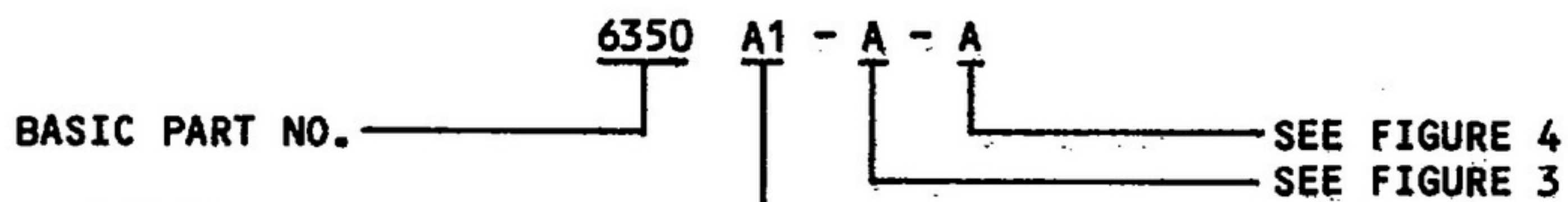
6350 Series Cylinder
and Valve Assembly
Figure 1

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DESIGNATION	CYLINDER PART NO.	CYLINDER CAPACITY (CU FT)	WEIGHT IN POUNDS		DOT RATING
			EMPTY	CHARGED	
A1	6084-5	28.8	13.69	16.08	3AA-1800
A2	6084-6	38.4	16.47	19.62	3AA-1800
A3	6084-3	11.0	6.18	7.09	3AA-2100 or 3AA-1800
A4	6084-4	22.0	10.13	11.97	3AA-1800
A5	6084-7	48.3	23.37	27.37	3AA-1800
A6	6084-8	54.0	27.00	32.52	3AA-2250
A7	6084-9	63.5	27.50	32.76	3AA-1800
A8	6084-12	107.0	48.00	56.90	3AA-1800
A11	6084-10	73.0	30.50	36.56	3AA-1800
A12	6084-11	91.0	42.00	49.55	3AA-1800
A13	6084-1	4.25	3.00	3.35	3AA-2100 or 3AA-1800
A14	6084-2	7.15	4.19	4.79	3AA-2100 or 3AA-1800
A15	27126	11.5	11.50	14.79	3AA-2150
A16	6084-16	15.20	7.30	9.10	3AA-2100
A20	6084-20	11.00	5.25	6.16	3AA-1800
A22	6084-26	39.4	13.00	16.27	3HT-1850
A25	6084-27	49.8	15.25	19.39	3HT-1850
A27	6084-29	66.0	19.00	24.98	3HT-1850
A33	6084-33	76.5	21.70	28.00	3HT-1850
A34	6084-34	115.0	33.00	42.55	3HT-1850

NOTE: A1 through A20 are lightweight cylinders (Type 3AA).
A22 through A34 are super-lightweight cylinders (Type 3HT).

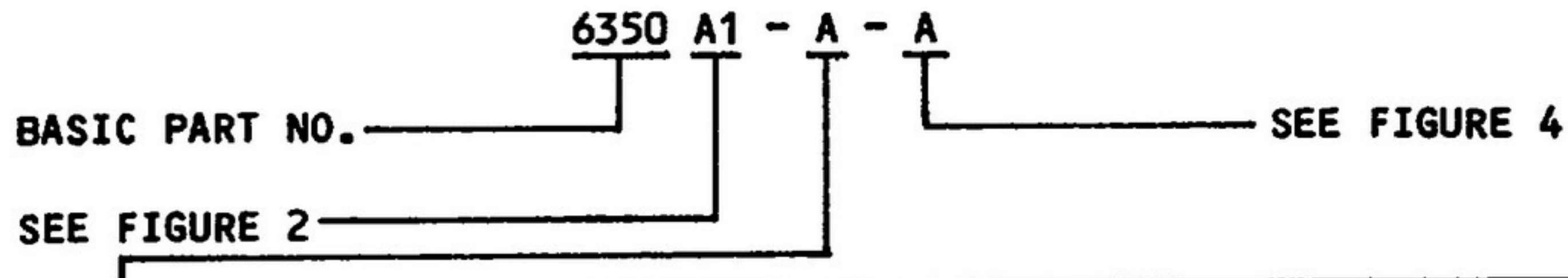
Charged weight of cylinders is calculated with cylinders charged to 1800 psig with oxygen per MIL-0-27210 Type 1.

Cylinder Type
Figure 2

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DESIGNATION	OXYGEN VALVE ASSEMBLY P/N NON-SLOW OPENING	SLOW OPENING OXY CYLINDER VALVE ASSY P/N	WEIGHT (lbs)
X	CYLINDER ONLY - NO VALVE		
A	802777-06		1.76
AA	802780-06		
BB		810850-1B	1.79
CC		10850-12	1.55
DD		810850-10	1.77
EE		810850-1A	1.79
FF		10850-11	1.56
GG		10850-36	1.31
LL		10850-21	1.46
NN		10850-35	1.15
O	802777-02		1.81
	802777-05		1.81
OO	802780-05		1.55
TV	802777-03		1.84
UU		10850-16	1.61
WW		10850-18	1.57
AAA		10850-31	1.26
SSS		10850-17	1.61
TTT		10850-57	
UUU		10850-67	
VVV		10850-58	
YYY		10850-19	1.58

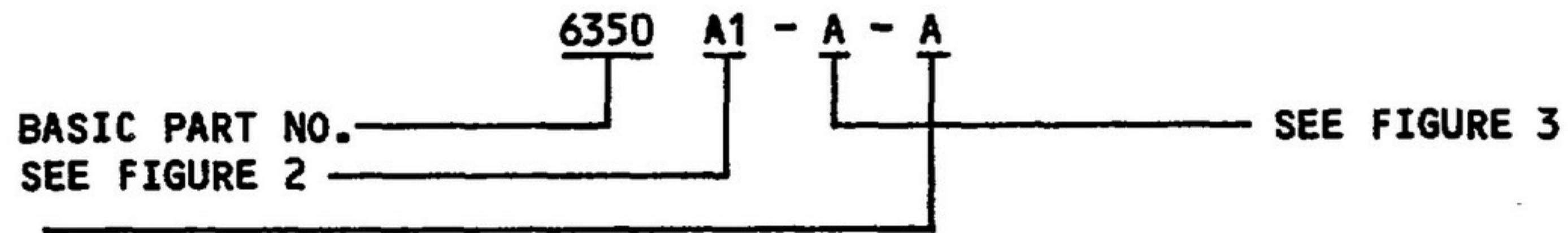
1 Inch Valve.
 1/2 Inch Valve.
 Use with 3AA 1800 Cylinders.
 Use with 3HT 1850 Cylinders.

Valve Type
Figure 3

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DESIGNATION	CYLINDER COLOR	CYLINDER LETTERING COLOR	OXYGEN
A	Green	No Lettering	X
B	Green	Yellow (For 3AA)	X
C	Green	Yellow (For 3HT)	X
E	Green & Yellow	None	X
F	Gray Green	No Lettering	X
G	Gray Green	Yellow	X
H	Gray Green	Yellow	X
Z	Green	White	X
AA	Green & Yellow	None	X
AD	Green	White	X
AE	Blue	None	X
AF	Blue	White (For 3AA)	X
AG	Blue	White (For 3HT)	X
AH	Blue	White	X
AJ	Green	Yellow (For 3AA)	X
AK	Green	Yellow (For 3HT)	X
AM	Green	Yellow	X
AN	Lt. Green with White Band	White	X

NOTE: 1. Designation AK and AM are identical except for positioning of stenciled information.

Cylinder Finish
Figure 4

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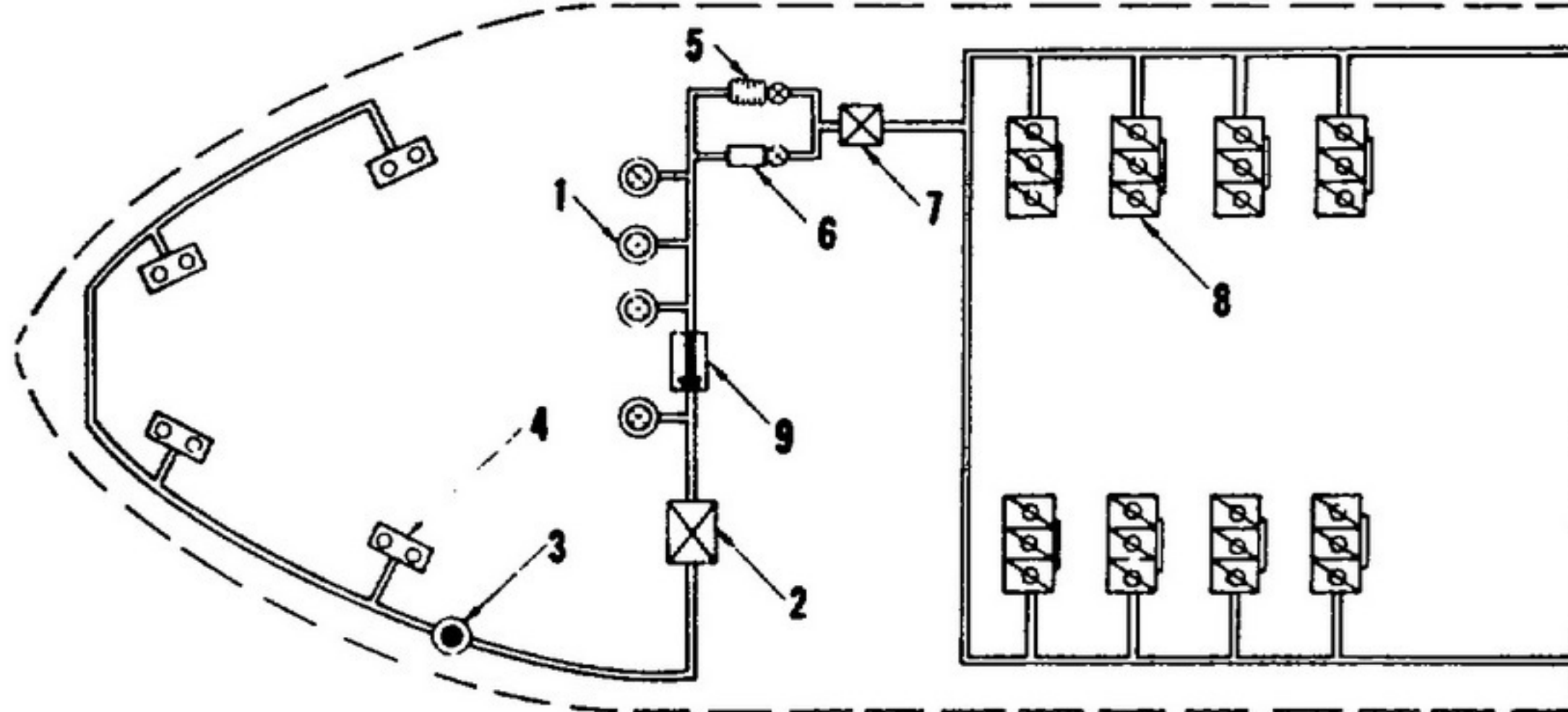
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- (5) To furnish, on some models, a gauge to visually monitor the supply of oxygen.

C. Typical Installation

- (1) A typical installation of the cylinder and valve assembly is shown in figure 5. A slow opening cylinder valve assembly is installed on each high pressure oxygen cylinder (1). The valves provide for manual, positive opening and closing of the oxygen system.



- | | |
|--|--|
| 1. HIGH PRESSURE OXYGEN SOURCE WITH SLOW OPENING CYLINDER VALVE ASSEMBLY | 6. ELECTRICALLY OPERATED OXYGEN SYSTEM RELEASE VALVE |
| 2. PRESSURE REGULATOR | 7. AUTOMATIC CONSTANT FLOW PRESSURE REGULATOR |
| 3. SLOW OPENING LINE VALVE | 8. PASSENGER MASK COMPARTMENT DOOR |
| 4. DILUTER DEMAND REGULATORS | 9. CHECK VALVE |
| 5. ANEROID OPERATED OXYGEN SYSTEM RELEASE VALVE | |

Typical Installation
Figure 5

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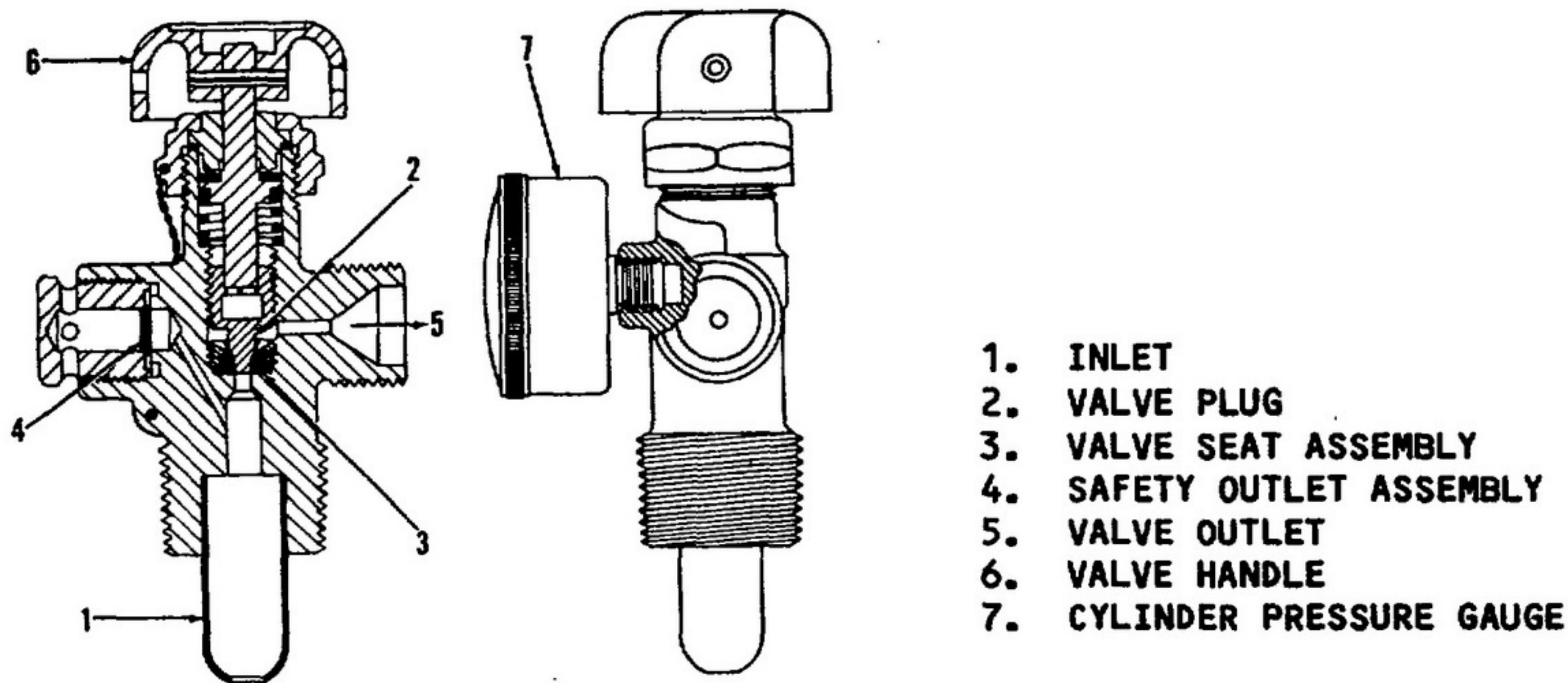
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D. Operation

- (1) Operation of all cylinder and valve assemblies is identical. The high pressure air or oxygen within the cylinder is released at the fitting when the shut-off valve is opened. The oxygen supply is maintained within the cylinder when the shut-off valve is closed.
- (2) The cross section illustrated in figure 6 is representative of all the slow opening oxygen cylinder valve assemblies. With the valves installed in a high pressure oxygen cylinder, and valve handle (6) closed (full clockwise), the oxygen is contained in the cylinder through the action of valve plug (2) and valve seat assembly (3). When valve handle (6) is opened (full counterclockwise), valve seat assembly (3) is raised away from inlet (1) thereby allowing oxygen flow to outlet (5). The valves are equipped with safety outlet assemblies (4). The safety outlet assemblies are preset to rupture at 2500-2775 psi in order to vent oxygen in the event of system overpressurization. A cylinder pressure gauge (7) is provided on some cylinder valve assemblies to indicate cylinder pressure.
- (3) These valves restrict flow only during the initial opening phase, and will prevent a downstream dead-ended system from being brought up to system pressure too rapidly.

NOTE: Rapid pressurization of a system is adiabatic in nature and may result in a potentially hazardous temperature rise.

There is no appreciable increase in flow through the valve when opened more than 3 turns. As with all valves, it should be opened fully and then backed off about 1/4 of a turn. Note, however, that the valve can be forced open more than 3-1/2 turns, but this begins to compress the sealing spring and results in an immediate increase in torque required to operate the valve. This should be avoided. Similarly, from a shut-off position, the valve handle can be further tightened approximately another 1/4 turn. This too is accompanied by an increase in torque required and does not enhance the sealing of the valve. This is the result of the KEL-F seat which will cold-flow with the application of additional torque. The packing on the rotating stem seals by the combined action of a spring and internal gas pressure. Application of sufficient axial force (push) on the valve handle can result in unseating of this seal and ensuing leakage, but only as long as this unseating force is maintained.

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**Slow Opening Oxygen Cylinder Valve Assembly
Figure 6**

VALVE CHARACTERISTICS:

- | | |
|----------------------------|-----------------------------------|
| 1. Torque to open or close | 15 inch pounds (1.7N.m) (Maximum) |
| 2. Torque to operate | 7 inch pounds (.8N.m) (Average) |
| 3. Full open position | 3-1/2 turns (Approximately) |

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2. Disassembly

WARNING: DISCHARGE CYLINDER PRESSURE PRIOR TO REMOVAL OF VALVE ASSEMBLY.

NOTE: Refer to the "EFFECT CODE" column of the Group Assembly Parts List for the parts applicable to the part number valve assembly being disassembled. Disregard instructions concerning parts that are not used on the valve being disassembled.

- A. Disassemble any 6350 Series Cylinder and Valve Assembly by unthreading valve assembly (7 or 8, IPL figure 1) from cylinder (9). Remove identification plate (2) from the cylinder if required.
- B. Disassemble the 802777 and 802780 Oxygen Valve Assemblies as follows (see IPL figure 2).
 - (1) Unthread and remove gauge (7) and safety relief assembly (8 or 20); then adaptor (9) and insert (10).
 - (2) Unthread connection (12); then remove gasket (13) and disc (14), only if the disc is ruptured.
 - (3) Disassemble valve assembly (20 through 35) as follows:
 - a. Unthread cap (21); then remove washer (22) and disc (23), only if the disc is ruptured.
 - b. Remove handwheel (24) by removing nut (25) and cup (26); then remove spring (27).
 - c. Remove washer (28) from body (35).
 - d. Unthread and remove nut (29); then remove follower (30) and packings (31 and 32) from nut (29).
 - e. Unthread and remove stem assembly (33) and plug assembly (34) from body (35).
- C. Disassemble the 810850 or 10850 Slow Opening Oxygen Valve Assemblies as follows (see IPL figure 3).
 - (1) Remove gauge (3 or 4) from body (100 or 101) by removing screws (5) and washers (7).

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- (2) Remove ring (8), packing (9) and sleeve (10).
- (3) Remove safety plug assembly (12 through 14), if applicable. Remove plug (12), disc (13 or 13A) and gasket (14) from body (100 or 101).

NOTE: Use driver (3 or 4, figure 1001), as applicable, to remove retainers in steps (4) through (12) below.
- (4) Remove safety outlet assembly (16 through 20), if applicable. Remove gasket (20), disc (19 or 19A), retainer (18), and insert (17) from nut (16).
- (5) Remove safety outlet assembly (25 through 29), if applicable. Remove gasket (29), disc (28 or 28A), retainer (27), and insert (26) from nut (25).
- (6) Remove safety outlet assembly (31 through 37), if applicable and disassemble as follows:
 - a. Unthread cap assembly (31) from the safety outlet assembly and remove screw (32).
 - b. Remove gasket (37), disc (36 or 36A), retainer (35) and insert (34) from nut (33).
- (7) Remove safety outlet assembly (39 through 43), if applicable. Remove gasket (43), disc (42 or 42A), retainer (41), and insert (40) from nut (39).
- (8) Remove safety outlet assembly (45 through 49), if applicable. Remove gasket (49), disc (48 or 48A), retainer (47), and insert (46) from nut (45).
- (9) Remove safety outlet assembly (51 through 55), if applicable. Remove gasket (55), disc (54 or 54A), retainer (53), and insert (52) from fitting (51).
- (10) Remove safety outlet assembly (57 through 63), if applicable and disassemble as follows:
 - a. Unthread cap assembly (57) from the safety outlet assembly and remove screw (58).
 - b. Remove gasket (63), disc (62 or 62A), retainer (61), and insert (60) from nut (59).

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- (11) Remove safety outlet assembly (65 through 71), if applicable and disassemble as follows:
 - a. Unthread cap assembly (65) from the safety outlet assembly and remove screw (66).
 - b. Remove gasket (71), disc (70 or 70A), retainer (69), and insert (68) from nut (67).
- (12) Remove safety outlet assembly (73 through 77), if applicable. Remove gasket (77), disc (76 or 76A), retainer (75) and insert (74) from nut (73).
- (13) Disassemble body assembly (82 through 101) as follows:
 - a. Remove plate (82).
 - b. Remove handle (83) by driving out pin (84).
 - c. Unthread and remove retainer (85). Remove guide (86) and packing (88) or washer (89).
 - d. Remove stem assembly (90) from body (100 or 101).
 - e. Remove washers (92 and 93), spring (94) and washer (95) from body (100 or 101).
 - f. Unthread valve plug (96) and valve seat assembly (97).

NOTE: Use tee wrench (1, figure 1001) to remove plug (96, IPL figure 3). Use valve seat wrench (2, figure 1001) to remove valve seat assembly (97, IPL figure 3).
 - g. Unthread plug (98) from body (100 or 101).
 - h. Unthread gauge guard (99) from body (100).

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3. Cleaning

Note: Using the cleaning materials listed in Table I, perform the cleaning procedures outlined in the following paragraphs. Equivalent materials may be used.

MATERIAL	DESCRIPTION	MANUFACTURER*	REFER TO PARA.
Neutralizing Agent	Fisan Enzodent	V44389	3.A.(5) 3.B.(2)
Degreasing Agent	1,1,1 Trichloroethane (MIL-T-81533)	V91784	3.A.(4) 3.A.(8)(a)
Corrosion Inhibitor	Phosphoric Acid Isopropyl Alcohol (50% of each by Vol.)	V70829 NOTE: Purchased Separately	3.A.(3)

*Refer to Illustrated Parts List, paragraph 12.A.(4) for Vendor's Codes.

List of Cleaning Materials
Table I

- A. After inspecting cylinders in accordance with Inspection/Check, perform the following cleaning procedure.

NOTE: This procedure will remove any organic impurities which are soluble in 1,1,1 Trichloroethane.

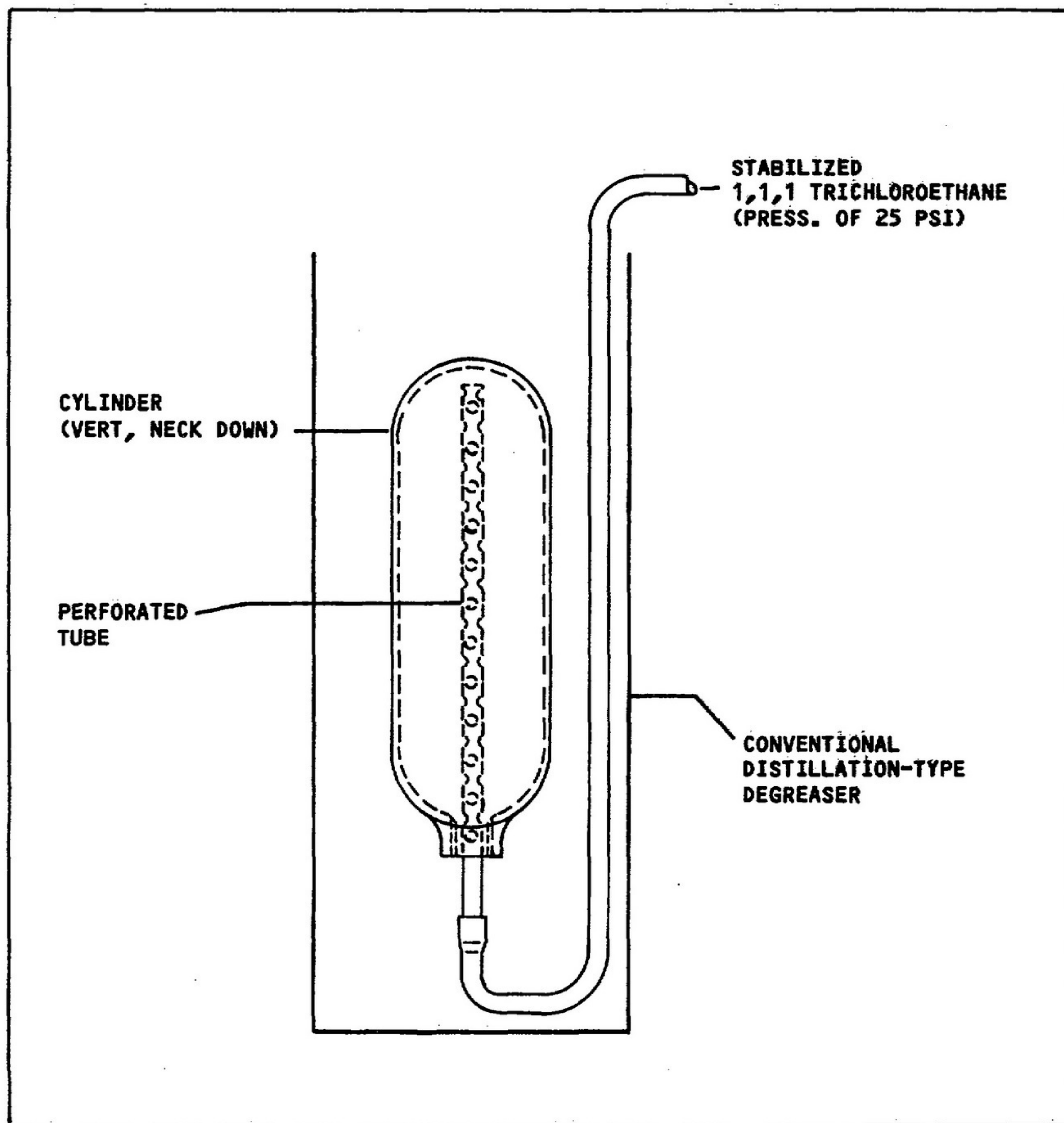
- (1) Wire brush the cylinder neck threads to remove sealing compounds or rust.
- (2) Shake out cylinder to remove any loose foreign matter.
- (3) Apply a solution (50% by volume of phosphoric acid/isopropyl alcohol) by brush to the area wire brushed, exercising care to prevent excessive application from running into the cylinder.

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**Cleaning Setup
Figure 201**

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WARNING: USE 1,1,1 TRICHLOROETHANE IN A WELL VENTILATED AREA ONLY. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN AND INHALATION OF TOXIC VAPORS.

- (4) Utilizing a cleaning setup as illustrated in figure 201, place the cylinder, with neck down, in vertical position over the perforated tube (the diameter and length of the tube will be determined by the particular size of the cylinder being cleaned). Pump stabilized 1,1,1 trichloroethane, slightly below its boiling point, through the tube, thoroughly spraying the interior of the cylinder being cleaned for a period of three minutes. Remove cylinder from tube and allow complete drainage of 1,1,1 trichloroethane into drain.
- (5) After completion of step (4), and using a cleaning setup similar to the setup illustrated in figure 201, pump a solution of Fisan Enzodent (8 ounces per each gallon of water), at a temperature of 180°F, through the tube thoroughly spraying the interior of the cylinder being cleaned for a period of three to five minutes. Accomplishment of this step will neutralize any acid constituents and destroy odor.
- (6) After completion of step (5), and using a cleaning setup similar to the setup illustrated in figure 201, pump water (at city pressure) at 160 to 180 degrees F, through the tube thoroughly spraying the interior of the cylinder being cleaned for a period of two minutes to remove any traces of alkaline residue.
- (7) After completion of step (6), and using a cleaning setup similar to the setup illustrated in figure 201, dry the interior of the cylinder with forced air heated to a temperature of 212°F, for a period of three to five minutes.
- (8) After completion of step (7), and after the cylinder has cooled to room temperature, reinspect the cylinder in accordance with Inspection/Check.

NOTE: The cleaning process used should be checked initially and periodically as follows.

- a. Pour 50cc of anhydrous, chemically pure, 1,1,1 Trichloroethane into the processed cylinder. Cap and shake well for one to two minutes.

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- b. Remove cap and pour flushings into a clean Erlenmeyer flask. Distill the 1,1,1 Trichloroethane in a water bath. After the 1,1,1 Trichloroethane has been distilled, examine residue in flask. If oil marks are visible, check cleaning solutions, implements and pressure.
 - c. After completion of steps (a) and (b), and using a cleaning setup similar to the setup illustrated in figure 201, clear all traces of the 1,1,1 Trichloroethane from the interior of the cylinder by blowing with dry, clean, oil-free air.
- B. After inspecting the valve assembly or regulator assembly in accordance with Inspection/Check, perform the following cleaning procedure.

WARNING: DO NOT ALLOW OIL, GREASE, FLAMMABLE SOLVENTS, OR OTHER COMBUSTIBLE MATERIALS TO COME IN CONTACT WITH PARTS THAT WILL BE EXPOSED TO PRESSURIZED OXYGEN. SUCH MATERIALS, AS WELL AS DUST, LINT, AND FINE METAL FILINGS ARE ALL POTENTIAL COMBUSTIBLES WHICH MIGHT, WHEN EXPOSED TO OXYGEN UNDER PRESSURE, IGNITE AND RESULT IN AN EXPLOSION.

- (1) Remove dirt and foreign particles from equipment by wiping with a clean lint-free cloth, or by blowing with clean oil-free air or nitrogen.

WARNING: USE 1,1,1 TRICHLOROETHANE IN A WELL VENTILATED AREA ONLY. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN AND INHALATION OF TOXIC VAPORS.

- (2) Metal parts which come in contact with oxygen and have become contaminated with grease can be cleaned by using a vapor degreasing method with stabilized 1,1,1 Trichloroethane. Blow clean and dry with a stream of clean, dry, oil-free air or nitrogen.
- (3) Non-metallic parts such as silicone and rubber components may be cleaned by using an ultrasonic detergent and water cleaning system. Rinse parts in clean water and dry thoroughly before reassembly. Do not use chlorinated solvents with non-metallic parts.



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4. Inspection/Check

NOTE: For Cylinder Inspection and Hydrostatic Retest, the use of Compressed Gas Association (CGA) pamphlets E-1, C-5, C-6, C-8 are recommended. These are available from:

CGA, INC.
1235 Jefferson Davis Highway
Arlington, VA 22202

- A. Inspect exterior of cylinder for indications of abuse, dents and bulges.
- B. Inspect neck of cylinders for cracks and distortion or damaged threads.
- C. Inspect all cylinders for peeling external paint and obscure markings.
- D. Inspect all high pressure cylinders for last date of hydrostatic test and type. If hydrostatic testing is required, test in accordance with Testing, step A.

NOTE: DOT Type 3HT cylinders require hydrostatic retesting every 3 years. DOT type 3A and 3AA cylinders require hydrostatic retesting every 5 years. Under certain usage conditions, DOT type 3A and 3AA cylinders may be retested at 10 year intervals. Refer to the current tariff of the "HAZARDOUS MATERIAL REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION" (49 CFR 170) paragraph 173.34 (e) (15) for eligibility requirements.

- E. Inspect interior of cylinders for defects which might render the cylinder unsafe.

NOTE: Inspect the interior of cylinders with the aid of a small electric light to give complete visibility of interior.

- F. Inspect the interior of cylinders for rust spots, improper parkerizing, or surface blemishes.
- G. Inspect valve and/or regulator for cracks, nicks, dents, or burrs which might cause malfunction.
- H. Inspect valve seats for scoring.
- I. Inspect all threads of valves and/or regulator for damage.
- J. Inspect overall condition of all components.

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5. Repair

NOTE: Table II lists the consumable materials for repair. Equivalent materials may be used.

MATERIAL	DESCRIPTION	MANUFACTURER*	REFER TO PARA.
Chromic Acid	Chromic Acid	V72658	5.B(5)
Phosphoric Acid	Phosphoric Acid	V70829	5.B(3)
Phosphate	Zn PO ₄	V44389	5.B(3)
*Refer to Illustrated Parts List, paragraph 12.A(4) for Vendor's Codes.			

List of Consumable Materials for Repair
Table II

- A. Replace cylinders that show signs of abuse, dents, bulges, cracks, distortion, damaged threads, and/or defects which might render the cylinder unsafe (refer to Inspection/Check, steps A, B, C, and E).

NOTE: DOT type 3HT Type cylinders must be discarded and replaced at the end of twenty-four years following date of original test or 4,380 pressurizations, whichever occurs first.

- B. Cylinders that require interior protective treatment may be reparkerized as follows (refer to Inspection/Check, step F).

- (1) Sandblast cylinders internally and externally using fine grit shot.
- (2) Rinse cylinder in clean water.
- (3) Apply a phosphate coating to the interior of the cylinder either by dipping or spraying. For dip-coating, a three minute minimum dip is recommended; for spray-coating, one minute minimum is recommended.

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NOTE: The balanced aqueous solution of phosphoric acid, phosphates, and accelerating agents produce a uniform water insoluble crystalline coating varying from gray to black in color.

(4) Rinse cylinder in clean water.

(5) Rinse cylinder in hot chromic acid (140 to 210°F) (60 to 99°C).

NOTE: The pH of the chromic acid rinse will be maintained between 2 and 4 by the addition of flake chromic acid or a mixture of chromic and phosphoric acids.

(6) Dry the cylinder by using warm air or a drying oven.

NOTE: For maximum corrosion resistance, coating weights of 400 mg/sq. ft. are usually adequate. This coating weight may be reduced to 200 mg/sq. ft. if an activator (titanium salts) is used. The coating weight may be deceptive if loosely adherent deposits are obtained, since adherent deposits give inferior performance. Finely crystalline zinc phosphate coatings provide the best corrosion resistance.

C. Remark and/or repaint cylinders in accordance with information outlined in figure 4.

D. 802777 and 802780 Oxygen Valve Assemblies (see IPL figure 2).

(1) Repair of parts is not recommended. Replace washer (28), follower (30), packings (31 and 32), plug assembly (34) and obviously defective parts at overhaul.

E. 10850 or 810850 Slow Opening Oxygen Cylinder Valve Assembly (see IPL figure 3).

(1) Repair of parts is not recommended. Replace packing (9), disc (13, 13A, 19, 19A, 28, 28A, 36, 36A, 42, 42A, 48, 48A, 54, 54A, 62, 62A, 70, 70A, or 76), gasket (14, 20, 29, 37, 43, 49, 55, 63, 71, or 77), identification plate (82), pin (84), packing (88), washers (89 and 92), stem assembly (90) and valve seat assembly (97).



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6. Assembly

NOTE: Table III lists the consumable materials required for reassembly.

MATERIAL	DESCRIPTION	MANUFACTURER	REFER TO PARA.
Sealing Tape	Permacel Tape No. 412	V99742	6.A.(2) 6.A.(20) 6.B.(5) 6.C.
Alpha Molykote	No. 106	V94499	6.A.(4)
Oxygen Lubricant	Krytox 240AC	V19898	6.A.(6) 6.A.(7) 6.A.(8) 6.A.(10)b 6.A.(11)b 6.A.(12)b 6.A.(13)b 6.A.(14)b 6.A.(15)b 6.A.(16)b 6.A.(17)b 6.A.(18)b 6.A.(19)b
Lock Wire	MS20995C20	-----	6.A.(9)
Temp-Alarm Paint	Torque Paint Temperature-Alarm Type 43E	V82682	6.A.(20)

*Refer to Illustrated Parts List, paragraph 12.A(4) for Vendor's Codes.

NOTE: Equivalent materials may be used, except for oxygen lubricant.

Recommended Consumable Materials for Assembly
Table III

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NOTE: Refer to the "EFFECT CODE" column of the Group Assembly Parts List for the parts applicable to the part number valve assembly being reassembled. Disregard instructions concerning parts that are not used on the valve assembly being reassembled.

A. Assemble the 810850 or 10850 Slow Opening Oxygen Cylinder Valves as follows (see IPL figure 3).

- (1) Thread gauge guard (99) onto body (100).
- (2) Wrap 1-1/2 turns of thread sealing tape to plug (98) in the direction of the thread spiral, beginning with the first thread. In no case shall the tape extend beyond the first thread. Trim off excess tape. Thread the plug into body (101).
- (3) Thread valve seat assembly (97) into the valve body until seated. Torque tighten the valve seat assembly per Table IV, using valve seat wrench (2, figure 1001).
- (4) If threads of valve plug (96, IPL figure 3) are uncoated or coating is worn off, apply a very light coat of molykote to the threads and bake at 260°F for one hour. Thread valve plug (96) into body (100 or 101). Thread valve plug (96) into valve body using tee wrench (1, figure 1001).
- (5) Place washer (95, IPL figure 3) and spring (94) into body (100 or 101).
- (6) Apply a thin film of oxygen lubricant to surfaces of washers (92 and 93) and place the washers on top of spring (94).

NOTE: Observe correct order of washers (92 and 93); washer (92) is non-metallic.

- (7) Apply a thin film of oxygen lubricant to face of gasket on stem assembly (90) and place the stem assembly into body (100 or 101). Place washer (89) on stem assembly (90).
- (8) Apply a wipe coat of oxygen lubricant to packing (88) and place packing into groove of guide (86).
- (9) Position guide (86) and secure in place by threading retainer (85) into body (100 or 101). Torque retainer (85) per Table IV. Lockwire the retainer to the body per applicable instructions of MS33540.

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CAUTION: THE TORQUE VALUES LISTED IN TABLE IV SHALL BE STRICTLY ADHERED TO WHEN INSTALLING RETAINERS. TORQUE VALUES DEPEND ON THE TYPE OF SAFETY DISC BEING INSTALLED.

(10) Reassemble safety outlet assembly (73 through 77) as follows:

- a. Position disc (76 or 76A) and gasket (77) into retainer (75).
- b. Apply a wipe coat of oxygen lubricant to exposed surface of gasket (77).
- c. Thread retainer (75) into body (100 or 101) using driver (3 or 4, figure 1001) and torque per Table IV.
- d. Position insert (74, IPL figure 3) in nut (73) and thread nut (73) into body (100 or 101). Lockwire the nut into the valve body per applicable instructions of MS33540.

(11) Reassemble safety outlet assembly (65 through 71) as follows:

- a. Position gasket (71) and disc (70 or 70A) into retainer (69). Convex side of gasket (71) shall be out.
- b. Apply a wipe coat of oxygen lubricant to exposed surface of gasket (71).
- c. Thread retainer (69) into body (100 or 101) using driver (3 or 4, figure 1001) and torque per Table IV.
- d. Position insert (68, IPL figure 3) in nut (67) and thread nut (67) into body (100 or 101). Lockwire the nut into the valve body per applicable instructions of MS33540.
- e. Secure cap assembly (65) to nut (67) with screw (66). Thread the cap assembly onto end of nut (67) after completion of testing.

(12) Reassemble safety outlet assembly (57 through 63) as follows:

- a. Position gasket (63) and disc (62 or 62A) into retainer (61).

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- b. Apply a wipe coat of oxygen lubricant to exposed surface of gasket (63).
- c. Thread retainer (61) into body (100 or 101) using driver (3 or 4, figure 1001) and torque per Table IV.
- d. Position insert (60, IPL figure 3) in nut (59) and thread nut (59) into body (100 or 101). Lockwire the nut into the valve body per applicable instructions of MS33540.
- e. Secure cap assembly (57) to nut (59) with screw (58). Thread the cap assembly onto end of nut (59) after completion of testing.

(13) Reassemble safety outlet assembly (51 through 55) as follows:

- a. Position gasket (55) and disc (54 or 54A) into retainer (53).
- b. Apply a wipe coat of oxygen lubricant to exposed surface of gasket (55).
- c. Thread retainer (53) into body (100 or 101) using driver (3 or 4, figure 1001) and torque per Table IV.
- d. Position insert (52, IPL figure 3) in fitting (51) and thread fitting (51) into body (100 or 101). Lockwire the fitting into the valve body per applicable instructions of MS33540.

(14) Reassemble safety outlet assembly (45 through 49) as follows:

- a. Position gasket (49) and disc (48 or 48A) into retainer (47).
- b. Apply a wipe coat of oxygen lubricant to exposed surface of gasket (49).
- c. Thread retainer (47) into body (100 or 101) using driver (3 or 4, figure 1001) and torque per Table IV.
- d. Position insert (46, IPL figure 3) in nut (45) and thread nut (45) into body (100 or 101). Lockwire the nut into the valve body per the applicable instructions of MS33540.

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- (15) Reassemble safety outlet assembly (39 through 43) as follows:
- Position gasket (43) and disc (42 or 42A) into retainer (41).
 - Apply a wipe coat of oxygen lubricant to exposed surface of gasket (43).
 - Thread retainer (41) into body (100 or 101) using driver (3 or 4, figure 1001) and torque per Table IV.
 - Position insert (40, IPL figure 3) in nut (39) and thread nut (39) into body (100 or 101). Lockwire the nut into the valve body per the applicable instructions of MS33540.
- (16) Reassemble safety outlet assembly (31 through 37) as follows:
- Position gasket (37) and disc (36 or 36A) into retainer (35).
 - Apply a wipe coat of oxygen lubricant to exposed surface of gasket (37).
 - Thread retainer (35) into body (100 or 101) using driver (3 or 4, figure 1001) and torque per Table IV.
 - Position insert (34, IPL figure 3) in nut (33) and thread nut (33) into body (100 or 101). Lockwire the nut into the valve body per the applicable instructions of MS33540.
 - Secure cap assembly (31) to nut (33) with screw (32). Thread the cap assembly onto end of nut (33) after completion of testing.
- (17) Reassemble safety outlet assembly (25 through 29) as follows:
- Position gasket (29) and disc (28 or 28A) into retainer (27).
 - Apply a wipe coat of oxygen lubricant to exposed surface of gasket (29).
 - Thread retainer (27) into body (100 or 101) using driver (3 or 4, figure 1001) and torque per Table IV.

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- d. Position insert (26, IPL figure 3) in nut (25) and thread nut (25) into body (100 or 101).
- (18) Reassemble safety outlet assembly (16 through 20) as follows:
 - a. Position gasket (20) and disc (19 or 19A) into retainer (18).
 - b. Apply a wipe coat of oxygen lubricant to exposed surface of gasket (20).
 - c. Thread retainer (18) into body (100 or 101) using driver (3 or 4, figure 1001) and torque per Table IV.
- (19) Reassemble safety plug assembly (12 through 14) as follows:
 - a. Position gasket (14) and disc (13 or 13A) into plug (12).
 - b. Apply a wipe coat of oxygen lubricant to exposed surface of gasket (14).
 - c. Thread plug (12) into body (100 or 101) and torque per Table IV.
- (20) Apply a wipe coat of oxygen lubricant to packing (9). Place ring (8), packing (9) and sleeve (10) on stem of gauge (3). Secure gauge (3) to body (101) with screws (5 or 6) and washers (7). Cover screw (5 or 6) heads with Temp-Alarm paint.
- (21) Wrap 1-1/2 turns of thread sealing tape to gauge (4) in the direction of the thread spiral, beginning with the first thread. In no case shall the tape extend beyond the first thread. Trim off excess tape. Thread the gauge into body (101).
- (22) Test the partially assembled slow opening oxygen cylinder valve assembly in accordance with Testing.
- (23) Complete assembly by securing handle (83) to stem assembly (90) with roll pin (84). Secure identification plate (82) to handle (83).

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- B. Assemble the 802777 and 802780 Oxygen Valve Assemblies as follows (see IPL figure 2).

(1) Assemble valve assembly (20 through 35) as follows:

- a. Thread plug assembly (34) into body (35).
- b. Place stem assembly (33) in body (35); then place packing (32) in nut (29) and thread the nut into the body.
- c. Install packing (31) and follower (30) on stem assembly (33) and carefully depress into nut (29). Place washer (28) over nut (29).
- d. Place handwheel (24) on stem assembly (33); then place spring (27) over the stem into the handwheel. Secure handwheel with cup (26) and nut (25).
- e. If disassembled, insert disc (23) and washer (22) in cap (21) and thread the cap onto body (35). Thread cap (20) onto body (35).

(2) If disassembled, insert disc (14) and gasket (13) in connection (12). Thread the connection onto body (35) and torque per Table IV.

(3) Place insert (10) in adaptor (9) and thread the adaptor into connection (12).

(4) Thread safety relief assembly (8) onto body (35).

(5) Wrap 1-1/2 turns of thread sealing tape to gauge (7) in the direction of the thread spiral, beginning with the first thread. In no case shall the tape extend beyond the first thread. Thread the gauge into body (35).

- C. Assemble the 6350 Series Cylinder and Valve Assembly as follows (see IPL figure 1).

NOTE: Wrap thread sealing tape to valves, prior to mating with cylinders in the direction of the thread spiral, beginning with the first thread. In no case shall the tape extend beyond the first thread. Trim off excess tape. Wrap two turns of tape on threads of valves requiring 100 pound-feet torque and three turns on threads of valves requiring 150 pound-feet.

(1) Secure plate (2) to cylinder (9).

(2) Thread appropriate valve assembly (7 or 8) into appropriate cylinder (9), torque the valve assembly per Table IV.

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7. Fits and Clearances

- A. Table IV presents the torque values necessary to assemble the units.

UNIT	TORQUE (Newton meters)
Plug (12, IPL figure 3)	*100 to 400 pound-inches (11,3-45,2)
Retainer (18, IPL figure 3)	**275/375 pound-inches (31/42) max.
Retainer (27, IPL figure 3)	**275/375 pound-inches (31/42) max.
Retainer (35, IPL figure 3)	**275/375 pound-inches (31/42) max.
Retainer (41, IPL figure 3)	**275/375 pound-inches (31/42) max.
Retainer (47, IPL figure 3)	**275/375 pound-inches (31/42) max.
Retainer (53, IPL figure 3)	**275/375 pound-inches (31/42) max.
Retainer (61, IPL figure 3)	**275/375 pound-inches (31/42) max.
Retainer (69, IPL figure 3)	*300 to 400 pound-inches (33,9-45,2)
Valve Body (19, IPL figure 2)	150 pound-feet (204)
Valve Body (100, IPL figure 3)	150 pound-feet (204)
Valve Body (101, IPL figure 3)	150 pound-feet (204)
Valve Seat Assy (97, IPL figure 3)	140 pound-inches (15,8)
Retainer (75, IPL figure 3)	**275/375 pound-inches (31/42) max.
Retainer (85, IPL figure 3)	300 pound-inches (33,9)
Connection (12, IPL figure 2)	300 pound-inches (33,9) maximum

*Torque components to minimum values. If leakage occurs, retorque to a higher value, but do not exceed the maximum.

**Torque retainer to 275 pound-inches (31N.m) maximum when installing disc, P/N 10003742 (silver) or to 375 pound-inches (42.3 N.m) when installing disc, P/N 10006001 (bronze).

Assembly Torque Values
Table IV

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8. Testing

WARNING: IN ALL PROCEDURES LISTED BELOW, OXYGEN IS SPECIFIED AS THE TEST GAS. WATER PUMPED NITROGEN OR OIL-FREE AIR MAY BE SUBSTITUTED, BUT RESULTS MUST BE CONVERTED PRIOR TO BEING COMPARED WITH THE RESULTS SPECIFIED FOR OXYGEN. DO NOT, UNDER ANY CIRCUMSTANCES, USE OIL PUMPED GAS AS THIS WILL CAUSE CONTAMINATION OF THE VALVE AND TEST EQUIPMENT. OIL, EVEN IN MINUTE QUANTITY, COMING IN CONTACT WITH OXYGEN MAY CAUSE AN EXPLOSION OR FIRE.

NOTE: Table V lists the consumable materials for testing. Equivalent materials may be used.

MATERIAL	DESCRIPTION	MANUFACTURER*	REFER TO PARAGRAPH
Oxygen	MIL-0-27210, Type 1	V07098	All Testing
Leak Test Solution	Sodium Chromate; 5cc per gallon of water	V72658	8.C(3), 8.D(4), 8.D(6), 8.E(3)

*Refer to Illustrated Parts List, paragraph 12.A(4) for Vendor's Codes.

List of Consumable Materials for Testing
Table V

- A. If required, subject the cylinders to hydrostatic testing in accordance with CGA Pamphlet C-1 and Hazardous Materials Regulations of Department of Transportation (DOT), Current Tariff No.
- B. Facilities performing such tests shall hold a current, valid DOT Approval.
- C. After reassembly of the 802777 and 802780 Oxygen Valve Assemblies perform a leak test in accordance with the following procedure.
 - (1) Close the valve.

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- (2) Apply pressure to the valve inlet (cylinder port).
- (3) Submerge the valve in a leak test solution. No leakage shall be evident.

D. After reassembly of the 10850 or 810850 Oxygen Cylinder Valve, perform the following test:

- (1) Attach a 2000 psi oxygen source to the inlet of the oxygen valve assembly through a suitably attached flexible hose or equivalent. Air or nitrogen, equivalent in dryness and cleanliness to MIL-D-27210 may be substituted for oxygen.
- (2) Manually close (full clockwise) the valve at control stem (90, IPL figure 3) fingertight.
- (3) If the valve is equipped with a pressure gauge, remove the gauge bezel and lens before continuing.
- (4) Completely submerge the valve in leak test solution.
- (5) With the valve submerged, apply ⁺⁰ 1850 -50 psi to the inlet. Check the valve for leakage for two minutes. Leakage as indicated by bubbles must be corrected before continuing.
- (6) Remove the valve from the leak test solution, suitably cap the valve outlet, open the valve (two revolutions counterclockwise) and completely submerge the valve for three minutes. Leakage as indicated by bubbles must be corrected before continuing.
- (7) Remove the valve from the solution, manually close the valve and remove the outlet cap or plug installed in step (6).
- (8) Check the torque required to open and close the pressurized valve from cracked to full open. The torque shall not exceed 15 pound-inches (1,70 N.m).
- (9) Shut off and remove the external oxygen source.
- (10) Dry the valve thoroughly with a stream of clean, dry, oil-free air. Insure that inside gauge mechanism is dry. Replace the gauge lens and bezel if required.
- (11) Complete assembly of the oxygen valve assembly (refer to Assembly, Step A.(15)).

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E. After reassembly of cylinder and valve assembly, perform a leakage test in accordance with the following procedure.

- (1) Charge cylinder to full operating pressure at a rate not to exceed 300 psi per minute.
- (2) Allow cylinder to cool to room temperature and "top off" if necessary.
- (3) Submerge the valve assembly and cylinder neck in leak test solution for two minutes, and check for leakage. No leakage shall be evident.

NOTE: If cylinder and valve assembly is equipped with a gauge, remove the gauge bezel and lens prior to submerging in leak test solution.

- (4) Check accuracy of valve or regulator gauge to master gauge. Accuracy to be ± 50 psi.
- (5) Record valve gauge indication and date of charging.
- (6) Store cylinder and valve assembly for a minimum of 72 hours. During this period check gauge indication against recorded indication. These indications shall be identical.
- (7) Check gauge indication against recorded indication. These indications shall be identical.
- (8) Dry cylinder and valve assembly thoroughly with low pressure oil-free air. Be sure gauge is dry internally.



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9. Trouble Shooting

A. See Figure 801 for trouble shooting chart.

TROUBLE	PROBABLE CAUSE	REMEDY
Improper indication on pressure gauge of 802777 or 802780 oxygen valve assembly	Faulty pressure gauge (3, IPL figure 2)	Replace pressure gauge
Leakage at gauge (3, IPL figure 2)	Pressure gauge (3) loose	Tighten pressure gauge
Leakage at valve stem (14)	Faulty washer (11)	Replace washer
	Faulty valve stem (14)	Replace valve stem
	Faulty valve plug assembly (17)	Replace valve plug assembly
Leakage at cylinder neck when oxygen valve assembly is mated with cylinder	Damaged cylinder threads	Replace cylinder
	Damaged threads on oxygen valve assembly	Replace oxygen valve assembly
Leakage between stem assembly (90, IPL figure 3) and guide (86)	Faulty stem assy (90, IPL figure 3) or spring (94)	Replace defective part
	Faulty seat on guide (86)	Replace guide
Leakage between guide (86) and retainer (85)	Faulty packing (88) or washer (89)	Replace packing; retorque retainer
Leakage past valve seat assembly (97)	Faulty valve seat assembly (97)	Replace valve seat assembly
	Faulty plug (96)	Replace plug
	Defect in body (100 or 101)	Replace body
	Valve seat assembly (97) insufficiently torqued	Torque per Table IV

Trouble Shooting Chart (Sheet 1 of 2)
Figure 801

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TROUBLE	PROBABLE CAUSE	REMEDY
Leakage at safety outlet assembly	Ruptured disc (13, 13A, 19, 19A, 28, 28A, 36, 36A, 42, 42A, 48, 48A, 54, 54A, 62, 62A, 70, 70A, 76 or 76A)	Replace disc
	Loose plug (12), fitting (51) or nut (16, 25, 33, 39, 45, 59, 67, or 73)	Tighten plug, fitting or nut
	Defective gasket (14, 20, 29, 37, 43, 49, 55, 63, 71 or 77)	Replace gasket
Leakage at gauge connection	Faulty packing (9)	Replace packing
	Loose gauge (4)	Tighten gauge
	Loose gauge (3)	Tighten screws (5)

Trouble Shooting Chart (Sheet 2 of 2)
Figure 801

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10. Storage Instructions

- A. Seal all valve/regulator ports with clean metal or polyvinyl chloride (PVC) caps or plugs to prevent foreign matter from entering the valve. Store in sealed polyethylene or polyvinyl bag.
- B. Do not use any preservative coating on valves.
- C. Charge cylinders until a gauge indication is available (approximately 150 psi).



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11. Special Tools, Fixtures and Test Equipment

- A. All special tools, fixtures and test equipment required for overhaul are listed in figure 1001 and illustrated in figure 1002 and are manufactured by Scott Aviation, Lancaster, New York.

FIGURE 1002 ITEM NO.	PART NUMBER	PART NAME	APPLICATION
1.	10850-T91-1	Tee Wrench	Used to install/remove valve plug (96, IPL figure 3)
2.	10850-T91-2	Valve Seat Wrench	Used to install/remove valve seat assembly (97, IPL figure 3)
3.	10850-T91-3	Driver	Used to install/remove retainers (18, 27, 35, 41, 47, 53, 61, 69 and 75, IPL figure 3) in valve assemblies using discs (19, 28, 36, 42, 48, 54, 62, 70 and 76)
4.	2786-S52-1	Driver	Used to install/remove retainers (18, 27, 35, 41, 47, 53, 61, 69 and 75, IPL figure 3) in valve assemblies using discs (19A, 28A, 36A, 42A, 48A, 54A, 62A, 70A and 76A)

Special Tools, Fixtures and Test Equipment List
Figure 1001

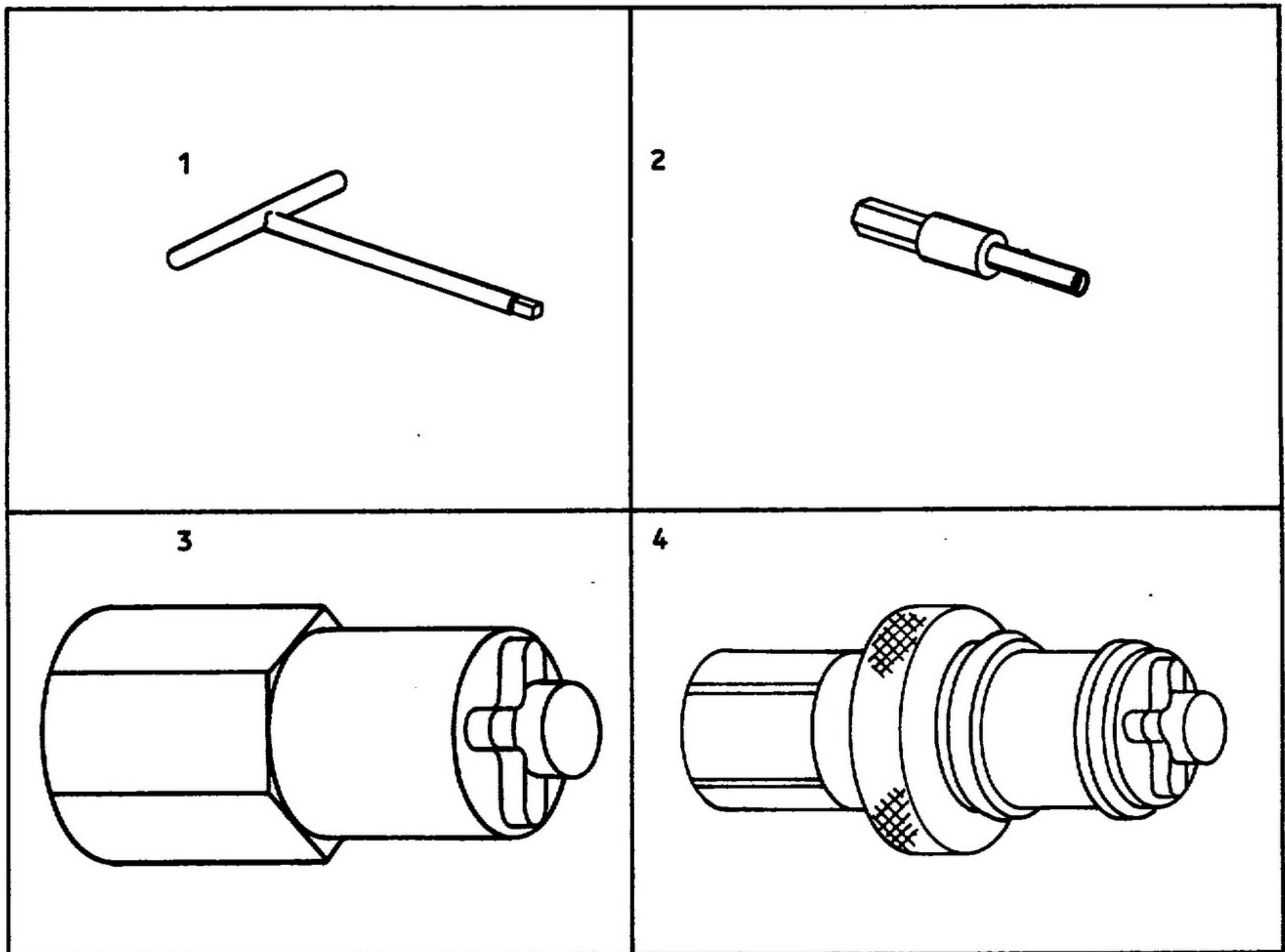
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**Illustration of Special Tools, Fixtures and Test Equipment
Figure 1002**

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12. Illustrated Parts List

NOTE: Some models of the slow opening valve assemblies have been discontinued, but repair parts are available. The complete new replacement assemblies are directly interchangeable with the superseded assemblies.

<u>MODEL</u>	<u>SUPERSEDED BY</u>
27876	810850-10
58537	810850-1A
58538	810850-1B
6449M	802777 and 802780

A. This Illustrated Parts List lists and describes the parts for the 6350 Series Cylinder and Valve Assemblies (see IPL figure 1), the 802777 and 802780 Series Oxygen Valve Assemblies (see IPL figure 2), and 10850, 810850 Series Slow Opening Oxygen Cylinder Assemblies (see IPL figure 3).

- (1) The Group Assembly Parts List consists of parts listings and completely indexed drawings. The particular valve/regulator assembly is followed immediately by its component parts, properly indented thereunder, to show their relationship to the assembly.
- (2) The quantities listed in the "UNITS PER ASSY" column are, in the case of assemblies, the total quantity used per cylinder and valve assembly at the location indicated, while the component parts indented under the assemblies are the quantity used per assembly. The quantities specified, therefore, are not necessarily the total used per cylinder and valve assembly.
- (3) The part numbers listed in the "PART NUMBER" column are Scott Aviation part numbers except standard parts, which are listed by "MS" and "AN" part numbers, and vendor items, which are listed by vendor part numbers. Commercial hardware available at commercial sources is identified by the abbreviation "COML" in the "PART NUMBER" column.
- (4) A six place code, following the description of a part, indicates the manufacturer of that part. Standard parts and parts carried under Scott part numbers have no vendor's code. The following list contains the codes, and names and addresses of manufacturers supplying items or articles for the cylinder and valve assemblies. This listing includes the vendor codes presented in Tables I, II, III and V.

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VENDOR'S CODE

<u>CODE</u>	<u>NAME AND ADDRESS</u>
V02697	Parker Seal Co. Division of Parkerhannifin Corp. Lexington, Kentucky
V04666	Robbins Aviation, Inc. Vernon, California
V07098	Union Carbide Corp. Linde Division Tonawanda, New York
V19898	E.I. DuPont De Nemours and Co., Inc. Wilmington, Delaware
V31879	Thermo Valves Corp. Mountain View, California
V44389	Oakite Products, Inc. Berkeley Heights, New Jersey
V70829	J.T. Baker Chemical Co. N. Phillipsburg, New Jersey
V72658	Allied Chemical Corp. Industrial Chemical Division Morristown, New Jersey
V72962	Elastic Stop Nut Division of Amerace Esna Corp. Union, New Jersey
V82682	Tempil Div. Big Tree Industries Inc. South Plainfield, New Jersey
V91784	Hooker Chemical Corp. Niagara Falls, New York
V94499	Dow Corning Corp. Alpha Molykote Plant Stamford, Connecticut
V99742	Johnson and Johnson, Inc. Permacel Division New Brunswick, New Jersey



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B. How to use this Illustrated Parts List.

- (1) If neither the part number nor the nomenclature is known, the part can be found by comparison with the exploded view illustration. When located on the illustration, the index number will refer to the line in the Group Assembly Parts List with the part number and the nomenclature.

C. How to determine the applicable "EFFECT CODE".

- (1) Parts used on only one part number oxygen valve assembly (see IPL figure 2) are indicated by a letter symbol immediately following the description of a part in the "EFFECT CODE" column. An explanation of the letter symbols used is outlined below. In cases when the "EFFECT CODE" column has been left blank, parts listed are common to all oxygen valve assemblies.

<u>PART NUMBER</u>	<u>EFFECT CODE</u>
802777-02	A
802777-03	B
802777-05	C
802777-06	D
802780-05	E
802780-06	F

- (2) Note the part number of the particular Slow Opening Valve Assembly (see IPL figure 3) being overhauled, and determine the "EFFECT CODE" letters applicable. For example, if the part number is 10850-11, the "EFFECT CODE" letters are A and J in the "EFFECT CODE" column. In addition to those parts, the particular assembly would use all parts having a blank "EFFECT CODE" column.

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PART NUMBER

EFFECT CODE

***810850-1**

1

10850-1

1

Basic Number

None

1	-----	*A
1	-----	A
2	-----	B
3	-----	W
5	-----	Y
6	-----	C
1	-----	J
2	-----	K
3	-----	L
4	-----	M
5	-----	N
6	-----	O
7	-----	P
8	-----	Q
9	-----	R
0	-----	S
A	-----	T
B	-----	U
C	-----	V

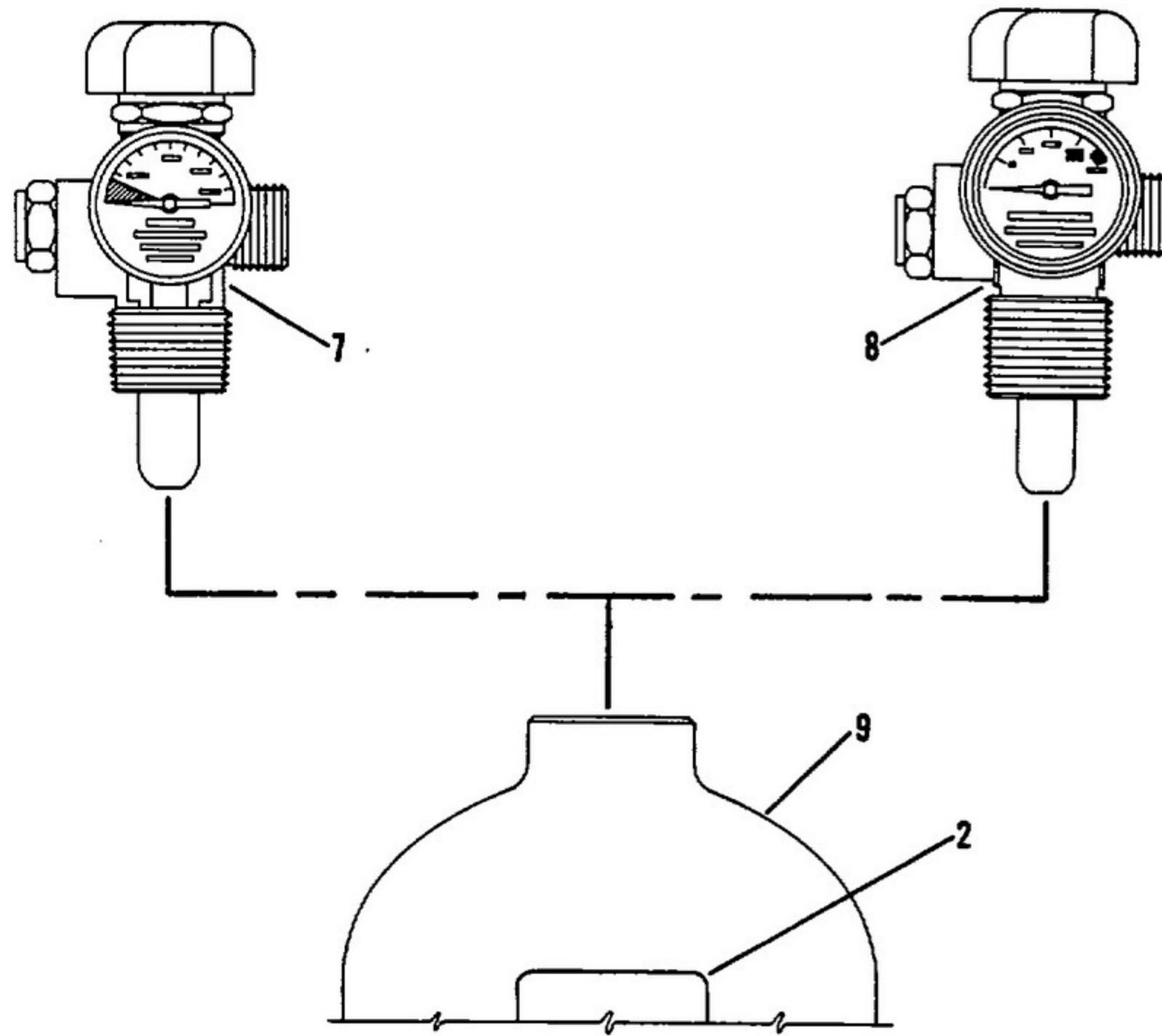
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**Cylinder and Valve Assembly
Figure 1**

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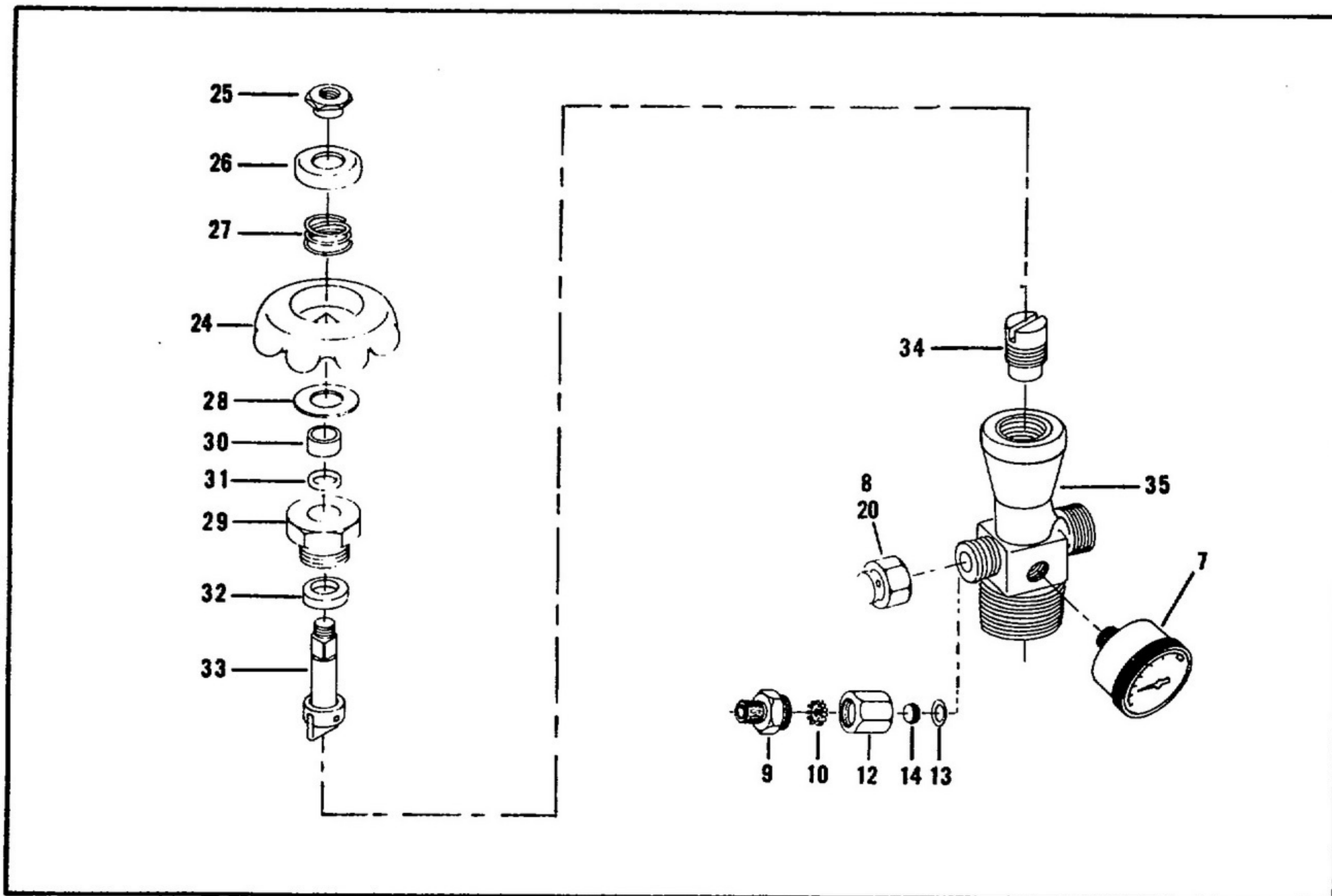
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FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	NOMENCLATURE 1234567	EFF CODE	UNITS PER ASSY
1-1	6350 SERIES		CYLINDER AND VALVE ASSY (SEE FIGURE 3)		1
2	10001301		. PLATE-IDENTIFICATION		1
-3	6449M SERIES		. VALVE ASSY-OXYGEN (SUPERSEDED BY 802777 AND 802780)		1
-3A	802777 SERIES		. ON-OFF OXYGEN VALVE ASSY (SUPERSEDES 6449M SERIES) (SEE IPL FIGURE 2 FOR BREAKDOWN)		1
-3B	802780 SERIES		. ON-OFF OXYGEN VALVE ASSY (SUPERSEDES 6449M SERIES) (SEE IPL FIGURE 2 FOR BREAKDOWN)		1
-4	*27876		. OXYGEN CYLINDER VALVE ASSY-SLOW OPENING (V04666 PART NO. ROV600) (SUPERSEDED BY 810850-10)		1
-5	*58537		. OXYGEN CYLINDER VALVE ASSY-SLOW OPENING (V04666 PART NO. ROV600- 1B) (SUPERSEDED BY 810850-1A)		1
-6	*58538		. OXYGEN CYLINDER VALVE ASSY-SLOW OPENING (V04666 PART NO. ROV600- 6) (SUPERSEDED BY 810850-1B)		1
7	10850 SERIES		. OXYGEN CYLINDER VALVE ASSY-SLOW OPENING (SEE IPL FIGURE 3 FOR BREAKDOWN)		1
8	810850 SERIES		. OXYGEN CYLINDER VALVE ASSY-SLOW OPENING (SEE IPL FIGURE 3 FOR BREAKDOWN)		1
9	6084 SERIES		. CYLINDER (SEE FIGURE 2)		1
*PARTS AVAILABLE FROM: ROBBINS AVIATION (V04666) VERNON, CALIFORNIA					

- ITEM NOT ILLUSTRATED

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Oxygen Valve Assembly
Figure 2

FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	NOMENCLATURE 1234567	EFF CODE	UNITS PER ASSY
2-1	802777-02		ON-OFF OXYGEN VALVE ASSY-1" (SEE IPL FIGURE 1, ITEM -3A FOR NHA)	A	RF
-2	802777-03		ON-OFF OXYGEN VALVE ASSY-1" (SEE IPL FIGURE 1, ITEM -3A FOR NHA)	B	RF
-3	802777-05		ON-OFF OXYGEN VALVE ASSY-1" (SEE IPL FIGURE 1, ITEM -3A FOR NHA)	C	RF
-4	802777-06		ON-OFF OXYGEN VALVE ASSY-1" (SEE IPL FIGURE 1, ITEM -3A FOR NHA)	D	RF
-5	802780-05		ON-OFF OXYGEN VALVE ASSY- 1/2" (SEE IPL FIGURE 1, ITEM -3B FOR NHA)	E	RF
-6	802780-06		ON-OFF OXYGEN VALVE ASSY- 1/2" (SEE IPL FIGURE 1, ITEM -3B FOR NHA)	F	RF

- ITEM NOT ILLUSTRATED

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FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	NOMENCLATURE 1234567	EFF CODE	UNITS PER ASSY
2 7	2661-03		. GAUGE		1
8	802776-01		. SAFETY RELIEF ASSEMBLY	A	1
9	10005594		. ADAPTOR	D,F	1
10	6572		. INSERT	D,F	1
-11	802779-02		. SAFETY RELIEF ASSEMBLY	F	1
-11A	802779-01		. SAFETY RELIEF ASSEMBLY	D	1
12	10005574		. . CONNECTION	D,F	1
13	6555-00		. . GASKET	D,F	1
14	7171-00		. . DISC	F	1
14A	10003742		. . DISC	D	1
-15	36809-01		. VALVE ASSEMBLY-OXYGEN	A,D	1
-16	36809-02		. VALVE ASSEMBLY-OXYGEN	C	1
-17	36809-03		. VALVE ASSEMBLY-OXYGEN	F	1
-18	36809-04		. VALVE ASSEMBLY-OXYGEN	E	1
-19	36809-05		. VALVE ASSEMBLY-OXYGEN	B	1
20	2541-12A-3000		. . CAP-SAFETY (V31879)	CE	1
-21	36809-31		. . CAP-SAFETY-VENT TYPE	B	1
-22	36809-28		. . WASHER	B	1
-23	36809-29		. . DISC	B	1
24	36809-16		. . HANDWHEEL ATTACHING PARTS		1
25	36809-17		. . NUT		1
26	36809-20		. . CUP-SPRING -----*-----		1
27	36809-19		. . SPRING-HELICAL- COMPRESSION		1
28	36809-21		. . WASHER		1
29	36809-12		. . NUT-PACKING		1
30	36809-24		. . FOLLOWER		1
31	36809-25		. . PACKING		1
32	36809-18		. . PACKING		1
33	2451-35		. . STEM ASSEMBLY (V31879)		1
34	2451-45K		. . PLUG ASSEMBLY (V31879)		1
35	36809-26		. . BODY-1" NGT	A-D	1
-36	36809-27		. . BODY-1/2" NGT	E,F	1

R

R

- ITEM NOT ILLUSTRATED

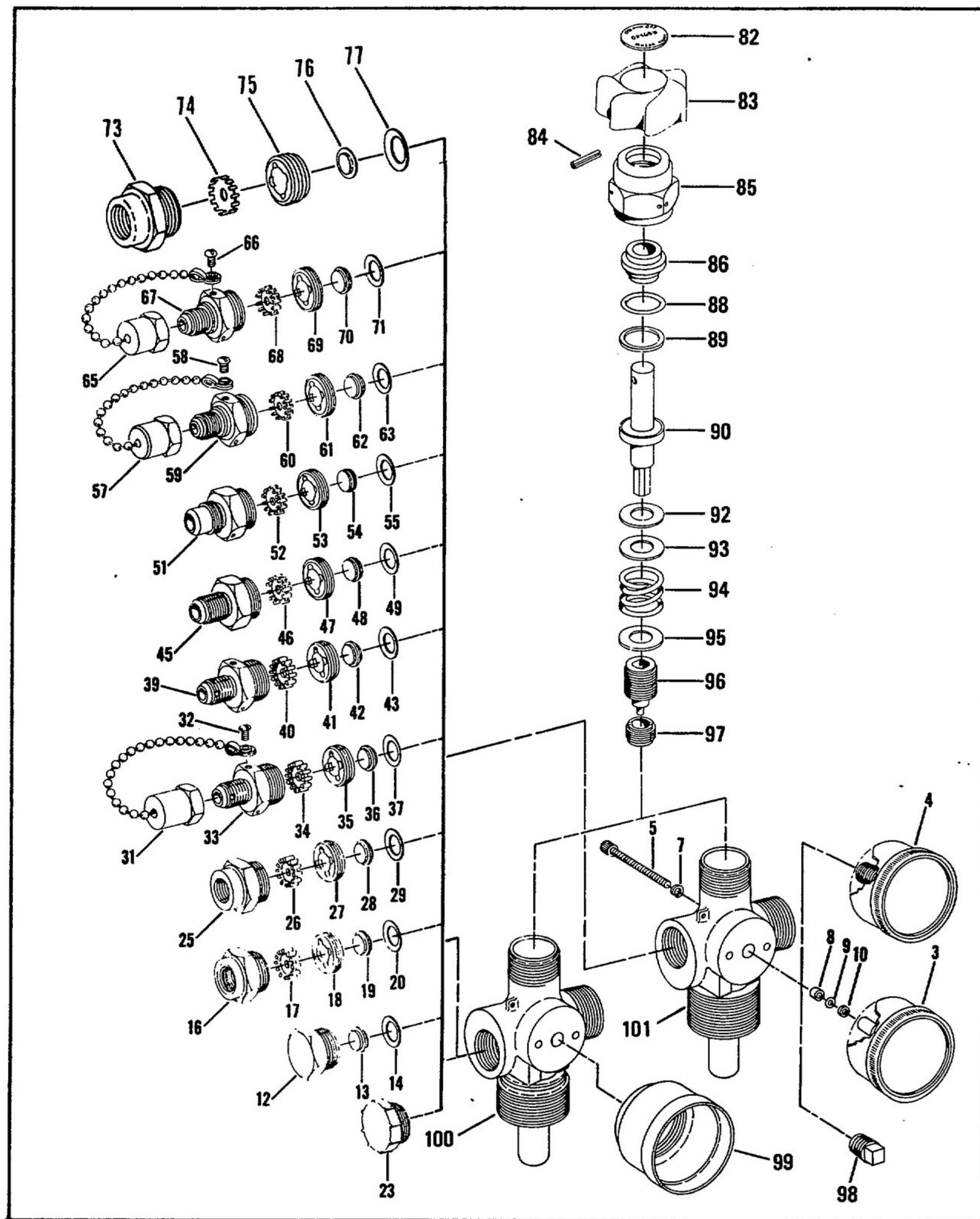
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Slow Opening Oxygen Cylinder Valve Assembly
Figure 3

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FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	NOMENCLATURE 1234567	EFF CODE	UNITS PER ASSY
3 -1	810850		SLOW OPENING OXYGEN CYLINDER VALVE ASSEMBLY (SEE IPL FIG. 1, ITEM 8 FOR NHA)		RF
-2	10850		SLOW OPENING OXYGEN CYLINDER VALVE ASSEMBLY (SEE IPL FIG. 1, ITEM 7 FOR NHA)		RF
3	21217		. GAUGE-PRESSURE	*A,A	1
4	2661-03		. GAUGE-PRESSURE	A	1
			ATTACHING PARTS		
5	AN500D6-22		. SCREW	*A	2
-6	18565		. SCREW	A	2
7	18600		. WASHER	*A,A	2
			-----*		
8	22152-1		. RING-BACKUP	*A,A	1
9	MS9068-006		. PACKING-PREFORMED	*A,A	1
10	22151-1		. SLEEVE	*A,A	1
-11	2814-00		. SAFETY PLUG ASSEMBLY	J	1
12	21077		. . PLUG	J	1
13	10003742		. . DISC	J	1
13A	10006001		. . DISC	J	1
14	6555-00		. . GASKET	J	1
-15	10689-00		. SAFETY OUTLET ASSEMBLY	K	1
16	2787-00		. . NUT	K	1
17	6572-00		. . INSERT	K	1
18	2786-00		. . RETAINER	K	1
19	10003742		. . DISC	K	1
19A	10006001		. . DISC	K	1
20	6555-00		. . GASKET	K	1
-21	2793		. SAFETY OUTLET ASSEMBLY (SUPERSEDED BY 22608-1)	L	RF
-22	2794		. SAFETY OUTLET ASSEMBLY (SUPERSEDED BY 22606-1)	M	RF
23	NO NUMBER		. PLUG-SHIPPING	N	RF
-24	10722-00		. SAFETY OUTLET ASSEMBLY	O	1
25	10723-00		. . NUT	O	1
26	6572-00		. . INSERT	O	1
27	2786-00		. . RETAINER	O	1
28	10003742		. . DISC	O	1
28A	10006001		. . DISC	O	1
29	6555-00		. . GASKET	O	1

- ITEM NOT ILLUSTRATED

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FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	NOMENCLATURE 1234567	EFF CODE	UNITS PER ASSY	
3-30	22606-01		. SAFETY OUTLET ASSEMBLY	P	1	
31	11272-00		. . CAP ASSEMBLY ATTACHING PARTS	P	1	
32	MS35206-213		. . SCREW -----*-----	P	1	R
33	22605-03		. . NUT	P	1	
34	6572-00		. . INSERT	P	1	
35	2786-00		. . RETAINER	P	1	
36	10003742		. . DISC	P	1	
36A	10006001		. . DISC	P	1	R
37	6555-00		. . GASKET	P	1	
-38	22608-01		. SAFETY OUTLET ASSEMBLY	Q	1	
39	22605-03		. . NUT	Q	1	
40	6572-00		. . INSERT	Q	1	
41	2786-00		. . RETAINER	Q	1	
42	10003742		. . DISC	Q	1	
42A	10006001		. . DISC	Q	1	R
43	6555-00		. . GASKET	Q	1	
-44	22608-02		. SAFETY OUTLET ASSEMBLY	R	1	
45	22759-00		. . NUT	R	1	
46	6572-00		. . INSERT	R	1	
47	2786-00		. . RETAINER	R	1	
48	10003742		. . DISC	R	1	
48A	10006001		. . DISC	R	1	R
49	6555-00		. . GASKET	R	1	
-50	800843-00		. SAFETY OUTLET ASSEMBLY	S	1	
51	10001581		. . FITTING-ADAPTER	S	1	
52	6572-00		. . INSERT	S	1	
53	2786-00		. . RETAINER	S	1	
54	10003742		. . DISC	S	1	
54A	10006001		. . DISC	S	1	R
55	6555-00		. . GASKET	S	1	
-56	800844-00		. SAFETY OUTLET ASSEMBLY	T	1	
57	11272-00		. . CAP ASSEMBLY ATTACHING PARTS	T	1	
58	MS35206-213		. . SCREW -----*-----	T	1	R
59	10001611		. . NUT	T	1	
60	6572-00		. . INSERT	T	1	
61	2786-00		. . RETAINER	T	1	
62	10003742		. . DISC	T	1	
62A	10006001		. . DISC	T	1	R
63	6555-00		. . GASKET	T	1	

- ITEM NOT ILLUSTRATED

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FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	NOMENCLATURE 1234567	EFF CODE	UNITS PER ASSY
3-64	800844-01		. SAFETY OUTLET ASSEMBLY	U	1
65	11272-01		. . CAP ASSEMBLY	U	1
			ATTACHING PARTS		
66	MS35206-213		. . SCREW	U	1
			-----*-----		
67	10001612		. . NUT	U	1
68	6572-00		. . INSERT	U	1
69	2786-00		. . RETAINER	U	1
70	10003742		. . DISC	U	1
70A	10006001		. . DISC	U	1
71	6555-00		. . GASKET	U	1
-72	801153-00		. SAFETY OUTLET ASSEMBLY	V	1
73	10002536		. . NUT	V	1
74	6572-00		. . INSERT	V	1
75	2786-00		. . RETAINER	V	1
76	10003742		. . DISC	V	1
76A	10006001		. . DISC	V	1
77	6555-00		. . GASKET	V	1
-78	800887-00		. BODY ASSEMBLY	*A	1
-79	10861-01		. BODY ASSEMBLY	A	1
-80	10861-02		. BODY ASSEMBLY	B	1
80A	10861-03		. BODY ASSEMBLY	W	1
80B	10861-05		. BODY ASSEMBLY	Y	1
-81	10861-06		. BODY ASSEMBLY	C	1
82	22427-01		. . PLATE-IDENTIFICATION		1
83	23274-01		. . HANDLE-VALVE		1
			ATTACHING PARTS		
84	79-022-094-0750		. . PIN-ROLL (V72962)		1
			-----*-----		
85	10685-00		. . RETAINER		1
86	10001810		. . GUIDE-STEM	*A	1
-87	10683-00		. . GUIDE-STEM	A,B,C, W,Y	1
88	2-14COMP77-545		. . PACKING-PREFORMED (V02697)	*A	1
89	10686-00		. . WASHER	A,B,C, W,Y	1
90	800994-00		. . STEM ASSEMBLY	*A	1
-91	10688-01		. . STEM ASSEMBLY	A,B,C, W,Y	1
92	10699-00		. . WASHER-THRUST		1
93	10698-00		. . WASHER-THRUST		1
94	2813-00		. . SPRING		1
95	2781-00		. . WASHER	A,B,C, W,Y	1

- ITEM NOT ILLUSTRATED

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FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	NOMENCLATURE 1234567	EFF CODE	UNITS PER ASSY
3 96	11225-00		. . PLUG-VALVE		1
97	11232-01		. . VALVE SEAT ASSEMBLY		1
98	6818-01		. . PLUG-PIPE	C	1
99	10001813		. . GUARD-GAUGE	*A	1
100	800886-00		. . BODY AND TUBE ASSEMBLY	*A	1
101	23310-01		. . BODY AND TUBE ASSEMBLY	A	1
-102	23310-03		. . BODY AND TUBE ASSEMBLY	B,C, W	1
-103	23310-15		. . BODY AND TUBE ASSEMBLY	Y	1

- ITEM NOT ILLUSTRATED

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